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AUTH.NAME AUTHOR AFFILIATION
UHRIG,R.E. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
EISENHUT,D.G. Division of Licensing

SUBJECT: Forwards revised response to Question 410.48 re associated circuits.Response will be incorporated into FSAR in future amend.

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	NRR/DSI/ASB	27	1	1	NRR/DSI/CPB	10	1	1
	NRR/DSI/CSB	09	1	1	NRR/DSI/ETSB	12	1	1
	NRR/DSI/ICSB	16	1	1	NRR/DSI/PSB	19	1	1
	NRR/DSI/RAB	22	1	1	NRR/DSI/RSB	23	1	1
	NRR/DST/LGB	33	1	1	REG FILE	04	1	1
	RGN2		2	2	RM/DDAMI/MIB		1	0
EXTERNAL:	ACRS	41	10	10	BNL(AMDTS ONLY)		1	1
	DMB/DSS (AMDTS)		1	1	FEMA-REP DIV	39	1	1
	LPDR	03	1	1	NRC PDR	02	1	1
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O. BOX 14000, JUNO BEACH, FL 33408

FLORIDA POWER & LIGHT COMPANY

July 30, 1982
L-82-321

Office of Nuclear Reactor Regulation
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: St. Lucie Unit No. 2
Docket No. 50-389
Final Safety Analysis Report
Response to ASB Question 410.48

Attached is Florida Power and Light Company (FPL) revised response to ASB Question 410.48 which has not been formally submitted on St. Lucie Unit 2 Docket. This response will be incorporated into the St. Lucie Unit 2 FSAR in a future amendment.

Very truly yours,

Robert E. Uhrig

Robert. E. Uhrig
Vice President
Advanced Systems and Technology

REU/RAK/jea

Attachment

cc: J. P. O'Reilly, Region II
Harold F. Reis, Esquire

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Question No.

410.48 The documentation on associated circuits is incomplete. Enclosed is a staff position regarding associated circuits entitled "Associated Circuit Guidance. Using the staff position, provide a discussion of associated circuits which identifies each associated circuit and the means to protect these circuits for every fire area. A fire area is an area which is surrounded by three hour rated fire barriers, including floors, ceilings, floor to ceiling walls, and all penetrations.

Response:

410.48 The staff's position on associated circuits is as follows:

1. Have a physical separation less than that required by Section III.G.2 of Appendix "R", and;

2. Have one of the following:

   a. a common power source with the shutdown equipment (redundant or alternative) and the power source is not electrically protected from the circuit of concern by co-ordinated breakers, fuses, or similar devices, or

   b. a connection to circuits of equipment whose spurious operation would adversely affect the shutdown capability (e.g., RHR/RCS isolation valves, ADS valves, PORVs, steam generator atmospheric dump valves, instrumentation, steam bypass, etc.), or

   c. a common enclosure (e.g., raceway, panel, junction) with the shutdown cables (redundant and alternative) and,

      1. are not electrically protected by circuit breakers, fuses or similar devices, or

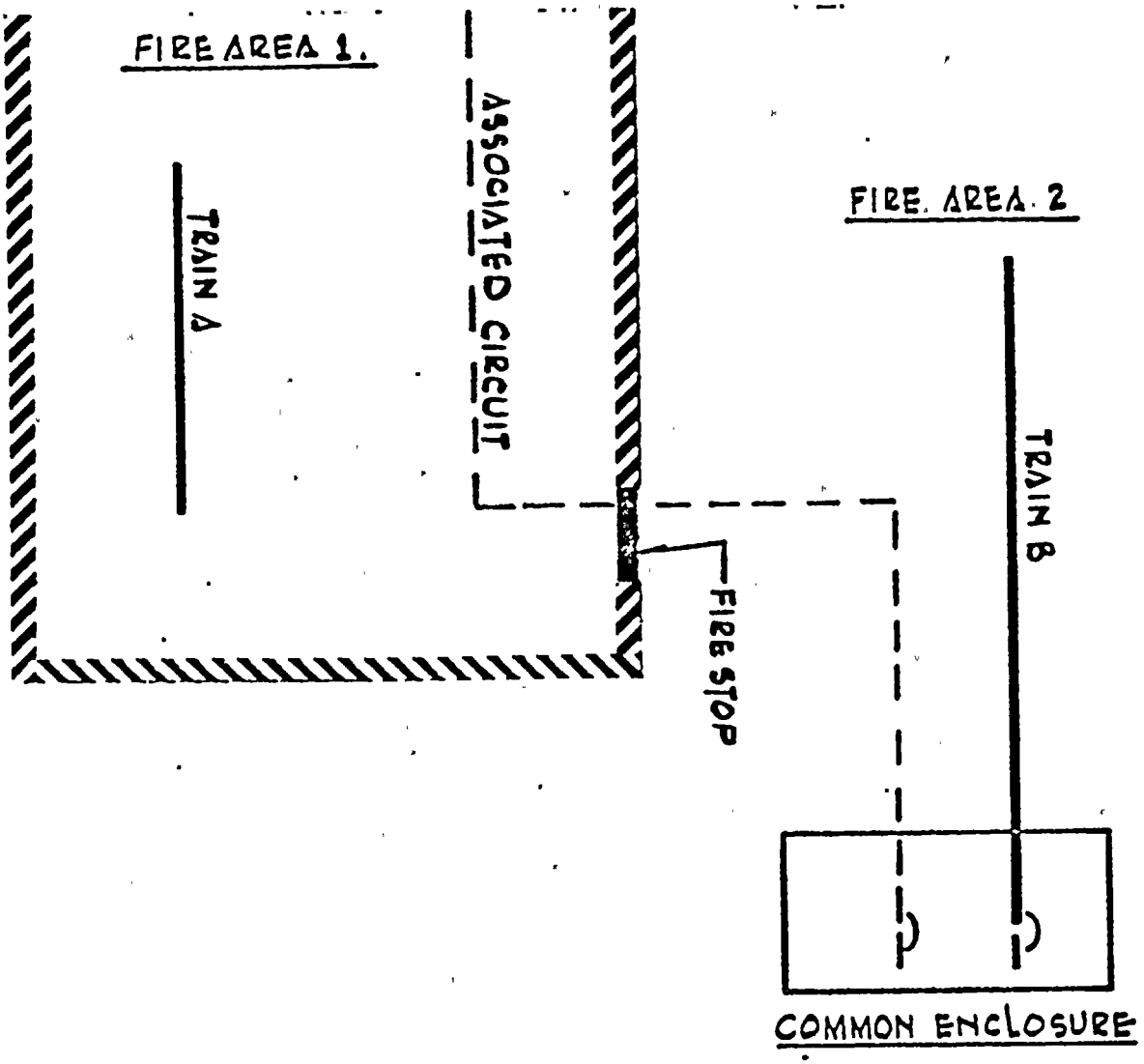
      2. will allow propagation of the fire into the common enclosure, (see diagram 2c).

Response: Cont'd

410.48 All circuits that do not meet the separation criteria of Section III.G.2 of Appendix "R" and have a common power source with safe shutdown equipment are provided with circuit breakers or fuses. Therefore, they are excluded from the staff's definition of associated circuits as outlined above in item 2a. Three such examples are shown on Control Wiring Diagrams (CWDs) 237, 507 and 287. These non-essential components are isolated from the vital power source (4.16 KV SWGR 2A3) by means of circuit breakers and protective relays.

All circuits for equipment whose spurious operation would adversely affect safe shutdown capability are addressed in the responses to question 410.47, 410.49 and 280.30. Three examples are shown on CWDs 1629 249 and 1626. Spurious operation of this equipment through adverse interaction with associated circuitry is prevented by circuit breakers and isolation devices.

For all circuits that do not meet the separation criteria of section III.G.2 of Appendix "R" and have a common enclosure, propagation of a fire into the common enclosure (see figure 2c attached) is prevented by the provision of fire stops at all fire boundries and by the use of IEEE-383 qualified cable which will not propagate fire. In addition all circuits are protected by circuit breakers or fuses. Therefore, all circuits are excluded from the staff's definition of associated circuits as outlined above in item 2c. Three examples of non-essential components whose circuitry shares a common enclosure (MCC-2A5) with essential equipment are shown on CWDs 167, 270 and 522. Protection of the essential components is provided by circuit breakers and thermal overloads.



A FIRE IN FIRE AREA 1 WILL NOT AFFECT THE TRAIN B CABLES IN THE COMMON ENCLOSURE BECAUSE THE FIRE WILL NOT PROPAGATE INTO FIRE AREA 2 BECAUSE CABLES ARE FIRE RETARDANT AND A 3HR. FIRE BARRIER IS PLACED IN THE TRAY WHERE THE CABLE PENETRATES THE WALL.

EBASCO SERVICES INCORPORATED	FLORIDA POWER & LIGHT COMPANY ST. LUCIE NO. 2 ASSOCIATED CABLES	FIG-2C
DIV. ____ DR. E.M. DATE ____ CH. ____ SCALE ____	APPROVED	